

REMARKS

Claims 1-45 are presently pending. Claims 1, 5, 7, 35 and 37-44 have been amended. Support for these amendments can be found in the specification at, for example, page 2, lines 30-32; page 11, lines 4-7; and Figure 1. No new matter has been added.

I. OBJECTION TO DRAWINGS

The Examiner has objected to the drawings that were submitted on February 8, 2002. Attached hereto as Appendix A is a substitute formal drawing of Figure 1, showing the layers of the correction tape of the present invention. Applicants respectfully request approval and entry of the attached formal drawing.

II. REJECTION OF CLAIMS 1-45 UNDER 35 U.S.C. § 112, SECOND ¶

Claims 1-45 have been rejected under 35 U.S.C. § 112, second paragraph, as allegedly being indefinite failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention for the reasons provided in the Office Action on page 2, ¶ 2.

Claim 1 has been amended and now recites “a masking layer on the release liner” and “a pressure sensitive adhesive layer on the masking layer.” Claims 5 and 7 have been amended to include the term “further” before the term “comprises.” The term “assembly” has been deleted from claims 37-41 and 43. Claim 44 has been amended to include the phrase “providing” before each of the process steps. Claim 42 has been amended to include the phrase “the masking layer is applied to one side of the release line to form a coated side and an uncoated side of the release liner.” (Emphasis added).

Applicants submit that claims 1-45 are now definite and request that the rejection of claims 1-45 under 35 U.S.C. § 112, second paragraph, be withdrawn.

II. REJECTIONS OF CLAIMS 1-45 UNDER 35 U.S.C. § 103(a)

Claims 1-43 and 45 have been rejected as allegedly being unpatentable over U.S. Patent No. 6,352,770 B1 to Nienaber et al. (“Nienaber”) or U.S. Patent No. 6,162,492 to Narayanan (“Narayanan”), and claims 1-45 have been rejected as allegedly being unpatentable over Nienaber or Narayanan in view U.S. Patent No. 4,434,207 to Franey

(“Franey”) or U.S. Patent No. 4,388,137 to McCarty *et. al.* (“McCarty”). These rejections are respectfully traversed.

A. Claims 1-43 and 45 are patentable over Nienaber

Pursuant to 35 U.S.C. § 103(c) and M.P.E.P. § 706.02(1)(2), a reference does not qualify as a prior art reference against an application under 35 U.S.C. § 102(a) if (1) such application was filed on or after November 29, 1999, and (2) the subject matter of the reference and the claimed invention were commonly owned at the time the invention was made.

The present application was filed on February 8, 2002, which is after November 29, 1999. In addition, at the time the present invention was made, the inventors of Nienaber and the inventors of the present application were subject to an obligation to assign their respective inventions to BIC Corporation. Pursuant to these obligations, Nienaber and the present application were assigned to BIC Corporation, as shown by the assignments in Appendices B and C. Appendix B includes an Assignment from the inventors of Nienaber to BIC Corporation and a Notice of Recordation showing that the Assignment was recorded in the U.S. Patent and Trademark Office (“USPTO”) on March 10, 2002, at Reel 010659, Frame 0953. Appendix C includes an Assignment from the inventors of the present invention to BIC Corporation and a Notice of Recordation showing that the Assignment was recorded in the USPTO on February 8, 2002, at Reel 012583, Frame 0044.

Thus, Nienaber does not qualify as a prior art reference that can be used in a 35 U.S.C. § 103(a) rejection. Accordingly, withdrawal of this rejection and allowance of claims 1-43 and 45 are respectfully requested.

B. Claim 1-43 and 45 are patentable over Narayanan

Claim 1, as amended herein, recites a “multilayer pressure sensitive correction tape comprising: (A) a release liner, (B) a masking layer on the release liner, and (C) a pressure sensitive adhesive layer on the masking layer, wherein the masking layer and/or pressure sensitive adhesive layer is radiation cured.” Claims 2-42 and 45 depend from claim 1 and, thus, also include these limitations. Independent claim 43 recites a “multilayer pressure sensitive correction tape comprising: (A) a release liner; (B) a masking layer that is cured by radiation after it is applied to the release liner; and (C) a pressure sensitive adhesive layer that is cured by radiation after it is applied to the masking layer; wherein: (i) the masking layer and the pressure sensitive adhesive layer contain reactive monomers when they

are applied to the correction tape; and (ii) the masking layer and the pressure sensitive adhesive layer contain no volatile components when they are applied to the correction tape.

Narayanan is directed to a multi-layer correcting material that includes a removable film and an adhesive layer. (Abstract). As stated by the Examiner in the Office Action dated April 4, 2003, Narayanan does not disclose or suggest a “masking layer or pressure sensitive adhesive layer (or, it is presumed, both) [which] are radiation cured” as required by the present claims. Narayanan does not even disclose or suggest a multilayer correction tape, wherein the correction medium layer and/or pressure sensitive adhesive layer can or should undergo further reaction, let alone curing. (*See, also*, Amendment filed June 18, 2003, page 10, line 14 to page 11, line 3). Thus, Narayanan *cannot* disclose or suggest radiation curing.

As stated in the specification of the present application, “‘radiation curing’ or ‘curing’ means a process of using ionizing energy (radiation) to induce reactive monomers or oligomers to polymerize” or “the process in which ionizing radiation is used to induce cross-linking between polymer chains.” (Specification, page 7, lines 17-20). The radiation-cured layers of the present invention “exhibit improved film toughness, improved resistance to ink ‘bleed through’, infusibility, and essentially no solubility in organic solvents or water.” (Specification, page 3, lines 7-9).

Narayanan does not disclose or suggest that Narayanan’s layers include any reactive monomers or oligomers that are available for a curing reaction, or any polymers that can be cross-linked. For example, Narayanan discloses terpolymer dispersions (based on vinyl acetate and acrylic acid esters) (col. 2, lines 10-11), “acrylic polymers, particularly those in ammonia” (col. 2, line 20), and copolymers containing carboxylic groups (based on acrylic acid esters) (col. 2, lines 24-25) in the covering layer. There is no indication in Narayanan that these terpolymers, polymers, and copolymers include any reactive monomers or oligomers that are available for a curing reaction, or that such terpolymers, polymers, and copolymers can be cross-linked using ionizing radiation. In addition, there is no indication in Narayanan that the adhesive layer includes any reactive monomers or oligomers that are available for a curing reaction, or that there is a polymer in the adhesive layer that can be cross-linked using ionizing radiation. Therefore, there is no indication that any of the layers of the multi-layer tape disclosed in Narayanan contain any reactive groups such as monomer, terpolymers, copolymers, or polymers which can be radiation cured.

Thus, Narayanan does not disclose or suggest a multilayer correction tape having a masking layer and/or pressure sensitive adhesive layer that possesses the properties

of the radiation-cured masking layer and/or pressure sensitive adhesive layer of the present invention.

One of ordinary skill in the art would not find motivation in Narayanan to radiation cure the correction material of Narayanan to obtain the present invention where Narayanan does not even disclose or suggest that his layers undergo further reaction, much less curing.

As acknowledged by the Examiner, Narayanan does not even disclose or suggest the use of radiation. Moreover, even if radiation were applied to the layers of Narayanan (which it is not), such layers would not necessarily be cured to form a cross-linked network as known to one skilled in the art. For example, Lenz, R., *Organic Chemistry of Synthetic High Polymers* 749 (1967) (the "Lenz reference") (attached hereto as Appendix D) discloses that:

both ultraviolet light and ionizing radiation are responsible for two general type of reactions: chain scission and cross-linking. The competition between these two reactions determines whether the net result of exposure of a polymer to radiation will be formation of low molecular weight fragments of that polymer or the formation of insoluble, infusible network structure.

The Lenz reference teaches that radiant energy degrades a polymer and undesirable chain scission competes with polymer cross-linking. Thus, as known in the art, layers such as disclosed in the tape of Narayanan *may* form an "insoluble, infusible network structure" or they *may* degrade into undesirable "low molecular weight fragments" upon application of radiation. One skilled in the art would not have a reasonable expectation of success that radiation curing would provide polymer cross-linking rather than chain scission. Therefore, given the unpredictable response of polymers to radiation curing, one of ordinary skill in the art would not be motivated to radiation-cure the layers of Narayanan to obtain the correction tape of the present invention, particularly where Narayanan does not even disclose or suggest that his layers undergo further reaction, much less curing or exposure to radiation.

Thus, for the above reasons, Narayanan does not disclose or suggest a correction tape as recited in claims 1-43 and 45.

In addition, with respect to claim 43, Narayanan does not disclose or suggest that "the masking layer and the pressure sensitive layer contain reactive monomers when they are applied to the correction tape" as recited in claim 43. Narayanan also does not disclose or suggest that the masking layer and the pressure sensitive adhesive layer contain no volatile components when they are applied to the correction tape assembly" as recited in claim 43. In

fact, Narayanan discloses that his marking layer is applied as an aqueous suspension. (Col. 2, lines 37-39 and 46). Narayanan further discloses drying of such layer. (Col. 2, line 60; col. 3, line 31; Examples 1 and 2). Narayanan also discloses "drying the adhesive coating." (Col. 3, line 37; see also Examples 1 and 2). Because Narayanan discloses that the marking layer is applied as an aqueous solution and that both layers are dried after application, Narayanan teaches away from a marking layer and a pressure sensitive adhesive layer that contain no volatile components when they are applied to the correction tape as required by claim 43. Thus, for these additional reasons, Narayanan does not disclose or suggest a correction tape as recited in claim 43. Also, one of ordinary skill in the art would not find motivation in Narayanan to radiation cure the correction material of Narayanan to obtain the present invention given the unpredictable response of polymers to radiation curing, and because Narayanan does not even disclose or suggest that his layers undergo further reaction, much less curing, and Narayanan teaches away from a marking layer and a pressure sensitive adhesive layer that contain no volatile components when they are applied to the correction tape.

To establish *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. *In re Royka*, 490 F.2d 981 (CCPA 1974). "When obviousness is based on a particular prior art reference, there must be a showing of a suggestion or motivation to modify the teachings of the reference." *B.F. Goodrich Company v. Aircraft Braking Systems Corporation*, 72 F.3d 1577, 1582 (Fed. Cir. 1996). The Federal Circuit has stated that it is improper to apply an "obvious-to-try" analysis under 35 U.S.C. § 103. *Gillette Co. v. S.C. Johnson & Son, Inc.*, 919 F.2d 720, 725 (Fed. Cir. 1990). The relevant inquiry is whether the prior art suggests the claimed invention, and whether that prior art would have indicated a reasonable expectation of success to one of ordinary skill in the art. *In re O'Farrell*, 853 F.2d 894, 902-03 (Fed. Cir. 1988). Both the suggestion and expectation of success must be found in the prior art, not in Applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 493 (Fed. Cir. 1991).

It is respectfully submitted that Narayanan does not disclose or suggest all the claim limitations; one of ordinary skill in the art would not find motivation in Narayanan to obtain the present invention; and there would not be a reasonable expectation of success to one of ordinary skill in the art to obtain the present invention. Thus, it is believed that claims 1-43 and 45 are patentable over Narayanan. Accordingly, Applicants respectfully request withdrawal of this rejection and allowance of claims 1-43 and 45.

C. Claims 1-45 are patentable over Nienaber in view of Franey

As discussed above, Nienaber does not qualify as a prior art reference that can be used in a 35 U.S.C. 103(a) rejection.

Additionally, Applicants respectfully submit that Franey does not disclose or suggest a multi-layer transfer correction tape as recited in claims 1-43 and 45, or a process for the manufacture of a multilayer pressure sensitive correction tape as recited in claim 44. Independent claim 44 recites a “process for the manufacture of a multilayer pressure sensitive correction tape comprising: (A) providing a release liner, (B) providing a masking layer on the release liner, and (C) providing a pressure sensitive adhesive layer on the masking layer; wherein the masking layer or pressure sensitive adhesive layer is cured by radiation.” The multi-layer pressure sensitive correction tape of the present invention is applied to mask, for example, handwritten printed characters. *See, e.g.*, Specification, page 5, lines 22-24.

Franey is directed to “correction mediums for lift-off correction by impact” (Col. 1, lines 8-9). Franey discloses that the “[p]rinting suitable for lift-off correction is removed bodily after impact of the correction medium against printed characters. A bond with the correction medium forms. The correction medium is removed, and the print stays with the correction medium . . . The correction medium of this invention is not adhesive or tacky prior to impact.” (Col. 1, lines 9-16).

Franey does not disclose or suggest a multilayer pressure sensitive correction tape as presently claimed. That is, Franey does not disclose or suggest a correction tape having three layers including a release liner, a masking layer on the release liner, and a pressure sensitive adhesive layer on the masking layer, as recited in the present claims. Moreover, Franey discloses that the correction medium of the Franey is not adhesive or tacky, thereby teaching away from the use of an adhesive layer. Also, Franey’s correction medium is used for removing printed characters, not to mask printed characters as in the present invention. Thus, Franey does not disclose or suggest, and in fact, teaches away from the presently-claimed invention. Since Franey teaches away from the present invention, one of ordinary skill in the art would not find motivation in Franey to obtain the present invention.

Therefore, it is believed that claims 1-45 are patentable over of Franey. Accordingly, withdrawal of this rejection and allowance of claims 1-45 are respectfully requested.

D. Claims 1-45 are patentable over Nienaber in view of McCarty

As discussed above Nienaber does not qualify as a prior art reference that can be used in a 35 U.S.C. § 103(a) rejection.

Additionally, Applicants respectfully submit that McCarty does not disclose or suggest a multi-layer transfer correction tape comprising a release liner, a masking layer on the release liner, and a pressure sensitive adhesive layer on the masking layer, as recited in claims 1-43 and 45, or a process for the manufacture of such multilayer pressure sensitive correction tape as recited in claim 44. The multi-layer pressure sensitive correction tape of the present invention is applied to a substrate to mask, for example, handwritten printed characters. *See, e.g.*, Specification, page 5, lines 22-24.

McCarty discloses applying a coating composition to a carrying web which is then brought into contact with a substrate to form a sandwich. Column 3, lines 24-29; column 11, lines 21-42. The resultant sandwich is subject to “a radiation curing process wherein said coating composition is polymerized and set on the surface on said porous substrate.” Column 11, line 43 to column 12, line 2.

In contrast to the present invention, McCarty does not disclose or suggest a multilayer pressure sensitive correction tape that includes a masking layer and a pressure sensitive adhesive layer on the masking layer as recited in claims 1-43 and 45. In addition, McCarty does not disclose or suggest providing a masking layer and providing a pressure sensitive adhesive layer as recited in claim 44. Moreover, by requiring that the coating composition is applied to a carrying web and then brought into contact with the substrate to form a sandwich, McCarty teaches away from the use of a masking layer and a pressure sensitive adhesive layer. Thus, McCarty does not disclose or suggest the presently-claimed invention. One of ordinary skill in the art would not find motivation in McCarty to obtain the multilayer correction tape of the present invention where McCarty does not disclose a masking layer and a pressure sensitive adhesive layer.

Therefore, it is believed that claims 1-45 are patentable over of McCarty. Accordingly, withdrawal of this rejection and allowance of claims 1-45 are respectfully requested.

E. Claims 1-45 are patentable over Narayanan in view of Franey

Claims 1-43 and 45 were shown above to be patentable over Narayanan. For the reasons discussed above, it is also believed that claim 44, which recites that the “masking layer or pressure sensitive adhesive layer is cured by radiation”, is also patentable over Narayanan.

As discussed above, Narayanan does not disclose or suggest a masking layer and/or pressure sensitive adhesive layer that is radiation cured” as recited in the present claims. Narayanan does not even disclose or suggest a multilayer correction tape, wherein the correction medium layer and/or pressure sensitive adhesive layer can or should undergo further reaction, let alone curing. In addition, Narayanan does not disclose or suggest that Narayanan’s layers include any reactive monomers or oligomers that are available for a curing reaction, or any polymers that can be cross-linked. Thus, one skilled in the art would not find motivation in Narayanan to radiation cure the correction material of Narayanan to obtain the present invention. Also, given the unpredictable response of polymers to radiation curing as explained in the Lenz reference, one skilled in the art would not be motivated to radiation-cure the layers of Narayanan to obtain a correction tape of the present invention.

With respect to claim 43, Narayanan does not disclose or suggest that “the masking layer and the pressure sensitive layer contain reactive monomers when they are applied to the correction tape” as recited in claim 43. Narayanan also does not disclose or suggest, and in fact *teaches away* from, a masking layer and a pressure sensitive adhesive layer that contain no volatile components when they are applied to the correction tape as required by claim 43. Thus, for these additional reasons, Narayanan does not disclose or suggest a correction tape as recited in claim 43.

The deficiencies of Narayanan are not overcome by Franey. As discussed above, Franey does not disclose or suggest a multilayer pressure sensitive correction tape as presently claimed. That is, Franey does not disclose or suggest a correction tape having three layers including a release liner, a masking layer on the release liner, and a pressure sensitive adhesive layer on the masking layer. Moreover, Franey discloses that the correction medium of the Franey is not adhesive or tacky, thereby teaching away from the use of an adhesive layer. Also, Franey’s correction medium is used for removing printed characters, not to mask printed characters or other material as in the present invention. Thus, Franey teaches away from the use of a masking layer. Thus, Franey does not disclose or suggest, and in fact, teaches away from the present invention.

An obviousness rejection based on a combination of references requires some teaching or motivation to combine the references. *In re Dembiczak*, 175 F.3d 994 (Fed. Cir. 1999) (“our case law makes clear that the best defense against the subtle but powerful attraction of hindsight-based obviousness analysis is rigorous application of the requirement for a showing of the teaching or motivation to combine prior art references”) abrogated on

other grounds by *In re Gartside*, 203 F.3d 1305 (Fed. Cir. 2000). This teaching or motivation must be provided by the prior-art, for example, the references themselves. *Id.* at 997.

There is no motivation in Narayanan or Franey to combine the teachings of these references to obtain the multilayer correction tape of the present invention. In particular, given the unpredictable response of polymers to radiation curing, one skilled in the art would not find motivation in Narayanan or Franey to combine the teachings of these references to obtain the present invention, particularly where Narayanan does not even disclose or suggest that its covering layer or adhesive layer undergo further reaction, much less radiation curing, and Franey does not even disclose or suggest, and in fact, teaches away from, a correction tape having three layers, including a release liner, a masking layer, and a pressure sensitive adhesive layer.

Narayanan teaches, *inter alia*, that his multi-layer correction tape is applied to a substrate and shows “good stripping-off properties”, *i.e.*, a transfer correction tape where the removable covering film stays affixed to the substrate. (*See, e.g.*, Narayanan, col. 2, lines 6-7; col. 3, lines 39-40; and col. 4, lines 6-7). In contrast, Franey discloses a correction medium for removing printed characters, not to cover printed characters or other material as in the present invention. Thus, one of ordinary skill in the art would also not find motivation in either reference to combine the teachings of Narayanan and Franey to obtain the present invention where Narayanan teaches a covering film to affix to a substrate, and Franey teaches a correction medium for removing printed characters.

Therefore, it is believed that claims 1-45 are patentable over Narayanan and Franey, whether taken alone or in combination. Accordingly, withdrawal of this rejection and allowance of claims 1-45 are respectfully requested.

F. Claims 1-45 are patentable over Narayanan in view of McCarty

Claims 1-43 and 45 were shown above to be patentable over Narayanan. For the reasons discussed above, it is also believed that claim 44, which recites that the “masking layer or pressure sensitive adhesive layer is cured by radiation”, is also patentable over Narayanan. As discussed above, Narayanan does not disclose or suggest a masking layer and/or pressure sensitive adhesive layer that is radiation cured” as recited in the present claims. Narayanan does not even disclose or suggest a multilayer correction tape, wherein the correction medium layer and/or pressure sensitive adhesive layer can or should undergo further reaction, let alone curing. In addition, Narayanan does not disclose or suggest that

Narayanan's layers include any reactive monomers or oligomers that are available for a curing reaction, or any polymers that can be cross-linked. Thus, one of ordinary skill in the art would not find motivation in Narayanan to radiation cure the correction material of Narayanan to obtain the present invention. Also, given the unpredictable response of polymers to radiation curing as explained in the Lenz reference, one of ordinary skill in the art would not be motivated to radiation-cure the layers of Narayanan to obtain a correction tape of the present invention.

With respect to claim 43, Narayanan does not disclose or suggest that "the masking layer and the pressure sensitive layer contain reactive monomers when they are applied to the correction tape" as recited in claim 43. Narayanan also does not disclose or suggest, and in fact *teaches away* from, a masking layer and a pressure sensitive adhesive layer that contain no volatile components when they are applied to the correction tape as required by claim 43. Thus, for these additional reasons, Narayanan does not disclose or suggest a correction tape as recited in claim 43.

The deficiencies of Narayanan are not overcome by McCarty. McCarty does not disclose or suggest a multilayer pressure sensitive correction tape that includes a masking layer and a pressure sensitive adhesive layer on the masking layer as recited in claims 1-43 and 45. In addition, McCarty does not disclose or suggest providing a masking layer and providing a pressure sensitive adhesive layer as recited in claim 44. Moreover, by requiring that the coating composition is applied to a carrying web and then brought into contact with the substrate to form a sandwich, McCarty teaches away from the use of a masking layer and a pressure sensitive adhesive layer. Thus, McCarty does not disclose or suggest the presently-claimed invention.

There is no motivation in Narayanan or McCarty to combine the teachings of these references to obtain the multilayer correction tape of the present invention. In particular, given the unpredictable response of polymers to radiation curing, one skilled in the art would also not find motivation in Narayanan or McCarty to combine the teachings of these references to obtain the present invention, particularly where Narayanan does not even disclose or suggest that its covering layer or adhesive layer undergo further reaction, much less radiation curing, and McCarty does not even disclose or suggest, and in fact, teaches away from, a correction tape having a masking layer, and a pressure sensitive adhesive layer.

Therefore, it is believed that claims 1-45 are patentable over Narayanan and McCarty, whether taken alone or in combination. Accordingly, withdrawal of this rejection and allowance of claims 1-45 are respectfully requested.

IV. CONCLUSION

Applicants respectfully submit that the present claims are now in condition for allowance and request an early issuance of a Notice of Allowance in connection with the present application. An early notice to that effect would be appreciated. Should the Examiner not agree with Applicants' position, then a personal or telephonic interview is respectfully requested to discuss any remaining issues and expedite the eventual allowance of the application.

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Respectfully submitted,

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Enclosures